

REMARKS/ARGUMENTS

The amendment to the specification corrects a clearly typographical error. No new matter has been added by the amendment to the specification.

Claims 1-33 are pending in the present application. Claims 1, 2, 4-6, 8-13, 15-17, 19-23, 26-28, and 30-33 are amended. Claim 24 is cancelled because claim 23 has been amended to include the features of claim 24. Support for the claim amendments can be found in the claims as originally filed, and in the Applicant's patent application on page 7, line 3 – page 10, line 21 and page 16, line 27 – page 17, line 16. Reconsideration of the claims is respectfully requested.

I. Interview Summary

Applicants thank the Examiner for the interview held on March 9, 2007 between the Applicant's representatives and the Examiner. The rejection of claim 1 under 35 U.S.C. § 102 was discussed. No agreement was reached.

II. 35 U.S.C. § 101; Claims 1-33

The Examiner rejected claims 1-33 under 35 U.S.C. § 101 as being directed towards non-statutory subject matter. Regarding claim 24, the rejection is now moot as claim 24 has been cancelled. Regarding claims 1 and 23, Applicants have amended the claims accordingly, thereby overcoming the rejection. Because claims 2-11 and 25-33 depend from claims 1 and 23, the rejection has also been overcome with respect to claims 2-11 and 25-33. The rejection with regard to claims 12-22 is respectfully traversed.

With regard to claims 12-22, the Examiner states that:

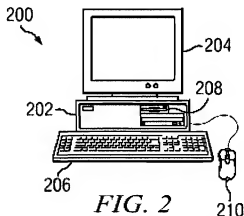
Claims 1-33 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 1-39 are not tangible. The preamble of independent claim 1, 12 and 33 recites "a method for indicating a directory location of currently visible elements while scrolling through a tree structure ", which is directed to software, per se, lacking any hardware to enable any functionality to be realized. The claimed features and elements of independent claims 1, 12 and 33 do not include hardware components or features that are necessarily implemented in hardware. Therefore, the claimed features of claims 1, 12 and 33 are actually a software, or at best, directed to an arrangement of software, and software claimed by itself, without being executed or implemented on a computer medium, is intangible. To expedite a complete examination of the instant application, the claims rejected under 35 U.S.C. 101 (nonstatutory) above are further rejected as set forth below in anticipation of the applicant amending these claims to place them within the four statutory categories of invention.

Office Action dated January 11, 2007, p. 2.

Amended claim 12, from which claims 13-22 depend, is as follows:

12. A data processing system for indicating, in a graphical user interface, a directory location of currently visible elements while scrolling through a tree structure, comprising:
- first displaying means for displaying data using the tree structure;
 - responsive to a user input to scroll through the data in the tree structure,
 - determining means for determining whether a current ancestor hierarchy of an item is displayed in a designated section of the tree structure; and
 - second displaying means for displaying the current ancestor hierarchy for the item in the tree structure in response to determining whether the current ancestor hierarchy of the item is displayed in a designated section.

Contrary to the Examiner's assertion, claim 12 produces a tangible result that is implemented on a computer medium. Under 35 U.S.C. § 112, sixth paragraph, "[a]n element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof." In the case at hand, claim 12 claims a "data processing system for indicating, in a graphical user interface, a directory location of currently visible elements while scrolling through a tree structure," which includes "displaying means" for "displaying data using a tree structure," and for "displaying the current ancestor hierarchy for the item in the tree structure." The corresponding structure in the specification for "displaying means" includes at least the following, not including any equivalents thereof:



Applicant's patent application, figure 2.

With reference now to the figures and in particular with reference to **Figure 2**, a pictorial representation of a data processing system in which the present invention may be implemented is depicted in accordance with a preferred embodiment of the present invention. A computer **200** is depicted which includes system unit **202**, video display terminal 204, keyboard **206**, storage devices **208**, which may include floppy drives and other types of permanent and removable storage media, and mouse **210**.

Applicant's patent application, page 7, lines 3-11 (emphasis added).

The cited portions of Applicant's patent application discloses a "video display terminal 204," which corresponds to the "displaying means" in claim 12. Thus, the Examiner incorrectly asserted that claim 12 "is directed to software, per se, lacking any hardware to enable any functionality to be realized." (Office Action dated January 11, 2007, p. 2.) Further, the "displaying means" of claim 12 produces the tangible result of "displaying data using a tree structure," and "displaying the current ancestor hierarchy for the item in the tree structure." Because claim 12 produces a tangible result that is implemented on a computer medium, the Examiner's rejection of claim 12 under 35 U.S.C. § 101 has been overcome. Also, because claims 13-22 depend from claim 12, the rejection has also been overcome with respect to claims 13-22.

III. 35 U.S.C. § 102, Anticipation; Claims 1-33

The Examiner rejected claims 1-33 under 35 U.S.C. § 102 as anticipated by Stead, Method and Apparatus for Displaying and Header Scrolling a Hierarchal Data Structure, U.S. Patent 6,430,574, December 16, 1999 (hereinafter "Stead"). Regarding claim 24, the rejection is now moot as claim 24 has been cancelled. This rejection is respectfully traversed with respect to the remaining claims.

With regard to claim 1, the Examiner states that:

Regarding claim 1, Stead discloses a method for indicating, in a graphical user interface, a directory location of currently visible elements while scrolling through a tree structure, comprising displaying data using a tree structure [...a tree data structure, nodes arranged in a parent-child structure; see col. 2, lines 35-43]; responsive to a user input to scroll through the data in the tree structure, determining whether a current ancestor hierarchy of an item is displayed in a designated section of the tree structure [...terminal nodes are typically characterized as having an ancestor node and no child nodes; see col. 2, lines 35-43]; and displaying the current ancestor hierarchy for the item in the tree structure in response to determining whether the current ancestor hierarchy of an item is displayed in a designated section (see col. 2, lines 44-64 and figures 1-2).

Office Action dated January 11, 2007, p. 3.

A prior art reference anticipates the claimed invention under 35 U.S.C. § 102 only if every element of a claimed invention is identically shown in that single reference, arranged as they are in the claims. *In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990). All limitations of the

claimed invention must be considered when determining patentability. *In re Lowry*, 32 F.3d 1579, 1582, 32 U.S.P.Q.2d 1031, 1034 (Fed. Cir. 1994). Anticipation focuses on whether a claim reads on the product or process a prior art reference discloses, not on what the reference broadly teaches. *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 218 U.S.P.Q. 781 (Fed. Cir. 1983). In this case, every feature of the presently claimed invention is not identically shown in the cited reference, arranged as they are in the claims.

Amended claim 1 is representative of claims 12 and 23. *Stead* does not anticipate amended claim 1 because *Stead* does not disclose each and every feature of amended claim 1. Amended claim 1 is as follows:

1. A computer-implemented method for indicating, in a graphical user interface, a directory location of currently visible elements while scrolling through a tree structure, comprising:
 - displaying data using the tree structure;
 - responsive to a user input to scroll through the data in the tree structure, determining whether a current ancestor hierarchy of an item is displayed in a designated section of the tree structure; and
 - displaying the current ancestor hierarchy for the item in the tree structure in response to determining whether the current ancestor hierarchy of the item is displayed in a designated section.

Stead does not disclose all the features of claim 1. Specifically, *Stead* fails to disclose the feature of “determining whether the current ancestor hierarchy of an item is displayed in a designated section” in the feature of “responsive to a user input to scroll through the data in the tree structure, determining whether a current ancestor hierarchy of an item is displayed in a designated section of the tree structure” and in the feature of “displaying the current ancestor hierarchy for the item in the tree structure in response to determining whether the current ancestor hierarchy of an item is displayed in a designated section.” The Examiner asserts otherwise, citing various portions of *Stead*. Each of these portions will be addressed in turn to show that *Stead* does not teach this claimed feature. Applicants first address the following portion of *Stead*:

FIG. 2 shows a diagram depicting an example of a tree data structure. Tree 205 includes root node 210, non-terminal nodes 215, and terminal (i.e., leaf) nodes 220 arranged in a parent-child structure. Root node 210 is the ancestor of every node in tree 205. Non-terminal nodes 215 are typically characterized as having an ancestor node and at least one child node. Terminal nodes 220 are typically characterized as having an ancestor node and no child nodes.

Stead, column 2, lines 35-43.

Neither the cited portion nor any other portion of *Stead* discloses the feature of *determining* whether the current ancestor hierarchy of an item is displayed in a designated section. *Stead* discloses providing graphical information while a user scrolls through a displayed hierarchal data structure. For example, *Stead* discloses subordinate data descriptors that indicate the proportion of subordinate data that is currently displayed for a root node. *Stead* also discloses reserving the top line of a data display for

displaying a root node. The cited portion of *Stead* describes a data tree structure in the abstract, which includes root nodes, non-terminal nodes, and terminal nodes, but the cited portion fails to disclose any determination step.

On the other hand, claim 1 recites the feature of *determining* whether the current ancestor hierarchy of an item is displayed in a designated section. The cited portion of *Stead* differs from the claimed feature because the cited portion of *Stead* discloses only the structure and contents of a data tree structure, but fails to disclose any determination step at all, let alone determining whether the current ancestor hierarchy of an item is displayed in a designated section. For example, the Examiner quotes the following sentence: “Terminal nodes 220 are typically characterized as having an ancestor node and no child nodes.” (*Stead*, column 2, lines 42-43.) However, the cited sentence only characterizes the structure of terminal nodes, and fails to disclose a determination step, as claimed.

The Examiner next cites the following portion of *Stead*:

Due to limitations of conventional scrolling methods a display output may not show pertinent hierarchical relationships, which can result in confusion and inefficiency for the user. For example, when perusing hierarchical data it can be advantageous that the hierarchical structure of data be conveyed to the user. For example, a text document may consist of a number of headers, each header associated with a set of subordinate body lines. An example of this structure is a newspaper document, consisting of a set of headlines (headers) and corresponding body lines correspond to the text pertaining to each particular headline. If a user were to peruse a paper newspaper, and a story were continued from the front page to an inner page, the inner page would typically contain the headline text at an appropriate position where the story was continued so that the user could quickly move to this section. However, if a user were to scroll a document containing a new articles [sic] using conventional scrolling methods, the body of the news story can be displayed without the corresponding headline when the headline has been scrolled off of the display.

Stead, column 2, lines 44-64.

However, the cited portion fails to disclose the feature of *determining* whether the current ancestor hierarchy of an item is displayed in a designated section. Instead, the cited portion, taken from the “Background of the Invention” portion of *Stead*, discloses the advantages of *Stead*’s inventions and the disadvantages of the prior art. For example, the cited portion states that “[d]ue to limitations of conventional scrolling methods a display output may not show pertinent hierarchical relationships.” *Stead*, column 2, lines 44-46. However, the cited statement discloses only a limitation of conventional scrolling methods, but fails to disclose making any determination, let alone determining whether the current ancestor hierarchy of an item is displayed in a designated section, as claimed.

Similarly, the cited portion also states that “when perusing hierarchical data it can be advantageous that the hierarchical structure of data be conveyed to the user.” *Stead*, column 2, lines 47-49. However, the cited portion discloses only an abstract advantage of conveying a hierarchical structure

to a user, but fails to disclose any determination step as to whether the current ancestor hierarchy of an item is displayed in a designated section. The latter part of the cited portion compares the structure of newspaper articles to scrollable news articles. For example, the cited portion states that “the body of the news story can be displayed without the corresponding headline when the headline has been scrolled off of the display.” *Stead*, column 2, lines 61-63.

However, the cited statement again fails to disclose a determination step, as claimed, because stating only a property of scrollable news articles, such as the ability to be displayed without a corresponding headline, is not the same as making a determination as to whether the current ancestor hierarchy of an item is displayed in a designated section. In other words, the claimed feature makes a determination that results in a different level of information: either (1) the current ancestor hierarchy of an item is displayed in a designated section, or (2) the current ancestor hierarchy of an item is not displayed in a designated section. The cited statement fails to produce such different information relating to the current ancestor hierarchy, but instead discloses only an abstract property of a scrollable news article. Therefore, the cited portion fails to disclose the feature of determining whether the current ancestor hierarchy of an item is displayed in a designated section.

Lastly, the Examiner cites the following figures of *Stead*:

FIG. 1A

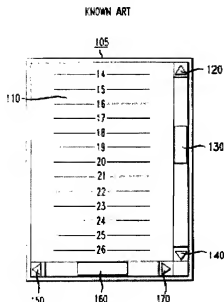
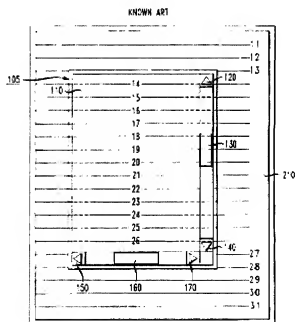
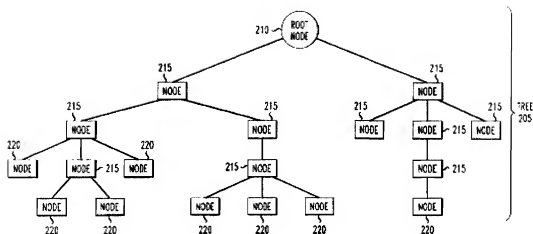


FIG. 1B



Stead, Figures 1A and 1B.

FIG. 2



Stead, Figure 2.

However, the cited figures fail to disclose the feature of determining whether the current ancestor hierarchy of an item is displayed in a designated section. Instead, Figure 1A illustrates a conventional scrollable user interface, Figure 1B illustrates a conventional scrollable user interface in relation to underlying data, and Figure 1C illustrates a tree data structure diagram in the abstract. None of the figures disclose any determination step because they are only illustrations of user views and abstract data structures. Therefore, neither the cited figures nor any other portion of *Stead* discloses the feature of determining whether the current ancestor hierarchy of an item is displayed in a designated section. Accordingly, *Stead* fails to disclose all of the features of claim 1.

Furthermore, *Stead's* failure to disclose the determining step, as claimed, is expected because *Stead's* invention does not rely on such a determination for the operation of his invention. For example, while describing the perpetual display of the root node such that no child node may be displayed without its root node, *Stead* discloses that “[w]hen a vertical scrolling mechanism is implemented, a top line of the display can always display a root node.” *Stead*, column 7, lines 48-50. Hence, *Stead's* invention does not rely upon any determination before displaying a root node, but instead “always” displays the root node regardless of any determination, let alone determining whether the current ancestor hierarchy of an item is displayed in a designated section.

As shown above, *Stead* fails to disclose the feature of determining whether the current ancestor hierarchy of an item is displayed in a designated section. Because *Stead* fails to disclose the determining step, as claimed, *Stead* also does not disclose the determining step as recited in the features of “responsive to a user input to scroll through the data in the tree structure, determining whether a current ancestor hierarchy of an item is displayed in a designated section of the tree structure” and “displaying the current ancestor hierarchy for the item in the tree structure in response to determining whether the current

ancestor hierarchy of an item is displayed in a designated section.” In other words, because *Stead* fails to disclose the determining step, as claimed, *Stead* cannot disclose that the determining step is either “responsive to” something, or that a step is performed “in response to” the determining step, as claimed. Furthermore, even assuming, *arguendo*, that the feature of determining whether the current ancestor hierarchy of an item is displayed in a designated section is disclosed in *Stead*, *Stead* still fails to disclose any “response to” or “in response to” relation with the determining step. Therefore, *Stead* fails to disclose the features of “responsive to a user input to scroll through the data in the tree structure, determining whether a current ancestor hierarchy of an item is displayed in a designated section of the tree structure” and “displaying the current ancestor hierarchy for the item in the tree structure in response to determining whether the current ancestor hierarchy of an item is displayed in a designated section.” Accordingly, *Stead* fails to disclose all of the features of claim 1.

Because claim 1 is representative of claims 12 and 23, the same distinctions between claim 1 and the reference also applies to claims 12 and 23. Also, because claim 23 has been amended to contain the features of claim 24, claim 23 claims other additional combinations of features not disclosed by the references. Additionally, because claims 2-11, 13-22, and 25-33 depend from claims 1, 12, and 23, at least the same distinctions between *Stead* and claims 1, 12, and 23 apply for these claims as well. Additionally, claims 2-11, 13-22, and 25-33 claim other additional combinations of features not disclosed by the reference. Therefore, the rejection of claims 1-33 under 35 U.S.C. § 102 has been overcome.

Furthermore, *Stead* does not teach, suggest, or give any incentive to make the needed changes to reach the presently claimed invention. Absent the Examiner pointing out some teaching or incentive to implement *Stead* and determine whether the current ancestor hierarchy of an item is displayed in a designated section, one of ordinary skill in the art would not be led to modify *Stead* to reach the present invention when the reference is examined as a whole. Absent some teaching, suggestion, or incentive to modify *Stead* in this manner, the presently claimed invention can be reached only through an improper use of hindsight using the applicants’ disclosure as a template to make the necessary changes to reach the claimed invention.

IV. **Conclusion**

The subject application is patentable over the cited references and should now be in condition for allowance. The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the Examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

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Respectfully submitted,

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